

L Number	Hits	Search Text	DB	Time stamp
1	695	vpi same vci same assign\$5	USPAT; US-PGPUB; EPO; JPO	2004/03/29 09:41
2	82	vpi same vci same assign\$5 near10 (user\$ or client\$1)	USPAT; US-PGPUB; EPO; JPO	2004/03/29 09:42
3	20	vpi same vci same preassign\$5	USPAT; US-PGPUB; EPO; JPO	2004/03/29 09:47
4	1	5583864.pn. and apd	USPAT; US-PGPUB; EPO; JPO	2004/03/29 09:47

Dustin , Looks like there is  
a lot of references on pre assigning

Virtual circuits ( VPI/VCI ) . Please  
take a look

Thanks, Josh

US-PAT-NO: 5539884

DOCUMENT-IDENTIFIER: US 5539884 A

TITLE: Intelligent broadband communication  
system and method  
employing fast-packet switches

----- KWIC -----

Detailed Description Text - DETX (24):

The signaling cell header includes preassigned values of VPI and VCI that identify it as a signaling cell. When the BIN SCP 61 reads the signaling cell values of VPI and VCI, the BIN SCP 61 determines that a signaling cell has been received, reads the signaling cell payload, and generates the translation information after performing such functions as carrier identification, address translation, and billing validation. In effect, the invention is a virtual signaling channel between each customer and the BIN SCP 61 since signaling cells can be transmitted through the virtual signaling channel on demand.

Detailed Description Text - DETX (37):

The cell 214 contains a header 216 having encoded information including an identification of the cell 214 as a signaling cell by a preassigned value of VPI and VCI or by payload type. The cell 214 further contains a payload 218 carrying information including: function requested, calling party address, called party address, billing address, and channel bandwidth requested.

US-PAT-NO: 5583864

DOCUMENT-IDENTIFIER: US 5583864 A

TITLE: Level 1 gateway for video dial tone networks

----- KWIC -----

Detailed Description Text - DETX (310):

In response to the connection establishment request, the access subnetwork controller 1240 first identifies an APD 1174 having available bandwidth capable of supporting the requested session and allocates a VPI/VCI value preassigned to that APD. The Level 1 Gateway 1108 will use a standard data transmission format, not necessarily MPEG. For non-MPEG transmissions, the APD 1174 will extract data from ATM cell payloads and encapsulate the data in MPEG-2 packets. Preferably the APD 1174 is preprogrammed to process cells having the allocated VPI/VCI value in a particular manner, i.e. to provide the correct PID values in the resultant MPEG packets and to output the packets on an identified one of the five output rails to result in transmission over a known RF channel. If not preprogrammed, the access controller 1240 instructs the assigned APD 1174 to provide the correct PID value in the MPEG packets and to output the packets on the identified output rail for result in transmission over a known RF channel. The access subnetwork controller 1240 therefore effectively determines the connection block descriptor that will apply for this session between the Level 1 Gateway 1108 and the DET 1218.

US-PAT-NO: 5677905

DOCUMENT-IDENTIFIER: US 5677905 A

TITLE: Access subnetwork controller for  
video dial tone  
networks

----- KWIC -----

Detailed Description Text - DETX (111):

Alternatively, the level 2 gateway 1401 accepts the call, provides a server output port and gives a port identification for the port on the server 1403 to the level 1 gateway 1230. The VIP's server output port is preassigned an originating VPI value and a range of originating VCI values, based on the maximum number of channels through the network that the VIP purchased for this server port. The level 2 gateway 1401 therefore assigns an available VCI value from that range to the session and forwards the VPI and VCI together with a desired bandwidth for the session to the level 1 gateway 1230.

Detailed Description Text - DETX (112):

In response to the acceptance message from the level 2 gateway 1401, the level 1 gateway transmits a connection request to the Access Subnetwork Controller 1231 requesting a channel of the desired bandwidth through the access subnetwork to the subscriber's DET 1217. The Access Subnetwork Controller 1231 determines if the bandwidth is available on the fiber 1415 going to the HDT 1180 serving the particular subscriber. The HDT 1180 is preassigned a range of terminating VPI/VCI values. The Access Subnetwork

Controller 1231 therefore assigns an available VPI/VCI value from that range to the session. The Access Subnetwork Controller 1231 instructs the serving HDT 1180 to route cells having that VPI/VCI value from the fiber 1415 to the channel assigned to the DET 1217 on the fiber 1190 and thus through the ONU 1210 and the subscriber's drop 1215 to that DET. The Access Subnetwork Controller 1231 also transmits a reply message to the level 1 gateway 1230 indicating that the link through the access subnetwork has been established. The reply message includes an identifier of the port for the fiber 1415 to the serving HDT 1180 and the assigned terminating VPI/VCI value.

Detailed Description Text - DETX (344):

In response to the connection establishment request, the Access Subnetwork Controller 2240 first identifies an APD 2174 having available bandwidth capable of supporting the requested session and allocates a VPI/VCI value preassigned to that APD. The level 1 gateway 2108 will use a standard data transmission format, not necessarily MPEG. For non-MPEG transmissions, the APD 2174 will extract data from ATM cell payloads and encapsulate the data in MPEG-2 packets. Preferably the APD 2174 is preprogrammed to process cells having the allocated VPI/VCI value in a particular manner, i.e. to provide the correct PID values in the resultant MPEG packets and to output the packets on an identified one of the five output rails to result in transmission over a known RF channel. If not preprogrammed, the Access Subnetwork Controller 2240 instructs the assigned APD 2174 to provide the correct PID value in the MPEG packets and to output the packets on the identified output rail for result in transmission over a known

RF channel. The Access Subnetwork Controller 2240 therefore effectively determines the connection block descriptor that will apply for this session between the level 1 gateway 2108 and the DET 2218.

US-PAT-NO: 6108708

DOCUMENT-IDENTIFIER: US 6108708 A

TITLE: Connection-oriented network using  
distributed network resources and predetermined VPIs for  
fast VC establishment

----- KWIC -----

Detailed Description Text - DETX (7):

If the source route is stored in the source route table 120, the decision at step 202 is affirmative, and the source user selects VPI and VCI all by itself from its own network resource (step 207) and sends a FAST SETUP packet to the network, containing the selected VPI/VCI in the allocated VPI/VCI field of the packet for message transmission, the source route data stored in the source route table 120 corresponding to the destination address and a header containing the selected VPI and a VCI which is preassigned for signaling purposes (step 208).

Detailed Description Text - DETX (15):

Assume that the user terminal 100 wishes to send a message to the user terminal 101 using a normal SETUP packet. Initially, the decision at step 202 is negative, and source user 100 sends a normal SETUP packet to the network, which is received by each successive node along the route. Each node examines the destination address in the packet and selects an output port number OP, a VPI, and an appropriate VCI for message transmission, and sets the OP and VPI

values into the packet as the route records of the nodes, and sets the VPI into the packet's header and the VCI into the allocated VCI field of the packet and forwards the packet to a downstream node where a new route record is added to the previous record routes. As illustrated in FIG. 4A, OP and VPI values (OP1, VP1), (OP3, VP2), (OP2, VP3) are successively set up in the header translation tables of nodes 110, 111 and 113 and added to the packet as their route records, producing a source route (OP1, VP1), (OP3, VP2), (OP2, VP3). At the intermediate node 112, the VPI value in the packet's header is rewritten according to a value preassigned to the cross-connect path. At the destination terminal 101, the source route data is inserted into a normal CONNECT packet, and the packet is sent back from the destination user to the source user terminal 100, signaling successful receipt of the SETUP packet in response to the normal CONNECT packet, the source user terminal saves the source route data into the source route table 120 (step 205) and sends a data message over the established virtual connection (step 206).

#### Detailed Description Text - DETX (18):

More specifically, when the source user 100 sends a FAST SETUP packet 500, it selects a message-transmission VCI=VC0 and a VPI=VP0 according to the destination address from its own network resource, inserts the source route data of the destination into the source route field of the packet, as shown in FIG. 5, sets the hop count to 1, sets the selected VC0 into the allocated field of the packet, and sets the selected VP0 and a preassigned signaling VCI=(S) into the header.